a3cont'd

target deceleration of the vehicle when the first parameter quantity exceeds a threshold value predetermined therefor, the target deceleration being increased from a predetermined minimum value to a predetermined maximum value according to an increase of the second parameter quantity.

Pages 3, line 26 to page 4, line 7, delete the current paragraph and insert therefor:

a3

Then, according to the above-mentioned construction, when the brake system was once put into operation for an anti-rolling-over control, the brake system is operated to accomplish a target deceleration of the vehicle that is adjusted between a predetermined minimum value thereof which may allow an early actuation of the brake system relative to the actual rolling state of the vehicle body and a predetermined maximum value thereof, the adjustment being made according to the magnitude of the second parameter quantity indicative of the change rate of the rolling state of the vehicle body. The change rate of the rolling state of the vehicle body predicts an increase or a decrease of a rolling angle of the vehicle body caused by the centrifugal force applied thereto in a turn running of the vehicle.

Page 4, lines 8-15, delete current paragraph and insert therefor:

a4

Therefore when the brake system put into its operation at a relatively early stage of a rolling according to a judgment by the first parameter quantity is controlled to increase its actuation strength from a predetermined minimum value to a predetermined maximum value according to an increase of the second parameter quantity, the vehicle is applied with an anti-rolling over control in a damping manner over a substantial range before the final limit of roll angle at which the prior art anti-rolling over control is abruptly actuated.

Page 7, lines 11-23, delete current paragraph and insert therefor:

a5

Wheel rotation speed sensors 32FL, 32FR, 32RL and 32RR are provided to detect wheel rotation speed of each of the front left, front right, rear left and rear right wheels. A

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steering angle sensor 34 is provided to detect the steering angle θ effected by a rotation of the steering wheel 14 by a driver. A lateral acceleration sensor 36 is provided to detect lateral acceleration Gy applied to the vehicle body. A roll rate sensor 38 is provided to detect a roll rate Rr of the vehicle body. The output of the wheel speed sensors 32FL-32RR, the steering angle sensor 34, the lateral acceleration sensor 36 and the roll rate sensor 38 are all supplied to the electric control means 30, which conduct control calculations for controlling an over-rolling of the vehicle body as described in detail hereinbelow and dispatch a control signal to the oil hydraulic circuit 22 for automatically controlling the brake system for the over-rolling control according to the present invention.

Page 8, lines 19-28, delete current paragraphs and insert therefor:

When the answer of step 30 is yes, the control proceeds to step 50, and a change rate θd of the steering angle θ obtained from the steering angle sensor 34 is calculated as the second parameter quantity.

a6

In step 60, a target deceleration Gxt for decelerating the vehicle is calculated based upon the steering angle change rate θd by referring to a map such as shown in Fig. 3. As will be noted in Fig. 3, the target deceleration Gxt has a minimum value Gxt1, and when the steering angle change rate θd increases beyond $\theta d1$, it increases along with increase of the value of θd until it saturates to a maximum value Gxt2 when the steering angle change rate θd increases beyond $\theta d2$.

Page 10, line 6 - page 11, line 15, delete current paragraphs and insert therefor:

a7

Figs. 4A and 4B are graphs showing how the target deceleration Gxt changes according to various manner of changes of the steering angle θ when the target deceleration Gxt is calculated according to the map of Fig. 3.

Fig. 5 shows a part of a flowchart which may be substituted for steps 50 and 60 of Fig. 2. According to this modification, subsequent to step 50, in step 52, a filtered change rate θdf of the steering angle θ is calculated such that the filtered change rate θdf is delayed relative to the change rate θd in a manner of representing an inertial delay of the vehicle body in its rolling movement relative to the action of the lateral force applied thereto.

In step 54, a larger one of the change rate θd and the filtered change rate θdf is calculated as a larger value θdl.

Then, in step 60, the target deceleration Gxt is calculated based upon the larger value θdl by looking up the map of Fig. 3.

A7 cont

The effect available by the modification of Fig. 5 will be appreciated from Figs. 6A-6E showing an example of the progress of the over-rolling control according to the present invention. It is assumed that the steering angle change rate θd changes as shown in Fig. 6A. For the convenience of simplicity, it is assumed that the braking for the over-rolling control is applied substantially equally to a pair of rear wheels. Then, regardless of the steering direction of the steering system, the braking forces are equally applied to the rear wheels. Therefore, such a change of the steering angle change rate θd as shown in Fig. 6A may be processed as shown in Fig. 6B, as if the steering angle change rate θd is processed in its absolute value.

The filtered change rate θdf calculated in step 52 is generated from the change rate θd in a manner such as shown by a solid line in Fig. 6C relative to the change rate θd shown by a phantom line. Then, the larger value θdl is calculated by step 54 as shown in Fig. 6D. Therefore, when θd1 and θd2 bordering the range of gradual increase of the target deceleration Gxt relative to the increase of the steering angle change rate θd or θdl with its minimum value range and its maximum value range are of the levels shown by two dot lines

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